REMARKS

Because no new limitations requiring further search have been added, entry of the above amendments is believed to be in order and the same is respectfully requested. Applicant has amended claims 1, 7, 14, and 16, and claim 17 is cancelled. No new matter is added. Claims 1-16 and 18-20 remain pending in the application. In view of the present amendments and the below remarks, Applicant respectfully requests reconsideration and allowance of the pending claims.

The Examiner rejected claims 1-20 under 35 U.S.C § 102(b) as being anticipated by U.S. Pat. No. 6,044,187 to *Duck et al* (hereafter *Duck et al.*). Claims 3, 4, 9, 10 and 17 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Publication No. 2003/0099430 to *Li et al.* (hereafter *Li et al.*). Applicant respectfully traverses the rejection in view of the present amendments and the below arguments.

1. System of Preferred Embodiment

In one embodiment of the invention, as defined in the amended claims, a filter module for an optical communications system includes a single lens, three optical fibers, an optical filter, and a mirror. The three optical fibers are arranged on a single side of the lens. More particularly, as defined in amended claim 1, the filter module preferably includes a single refraction index distribution type rod lens having a first end face in core alignment with the mirror and a second end face to receive a light beam. Advantageously, by providing a filter module 1 that includes one refractive index

distribution type rod lens 20, filter module 1 can be made smaller and requires fewer processes for core alignment and fixation, thus overcoming a well-understood drawback with prior modules, as detailed at *pp.* 4 and 5 of the Specification. Also, the number of components that make up the filter module 1 is reduced, permitting significant benefits over existing modules with respect to cost of production.

Another embodiment of the invention, as defined by the claims, provides a demultiplexing/multiplexing unit that includes a plurality of filter modules that are connected in cascade. Each of the filter modules includes a single lens, optical filter, a mirror, and three optical fibers arranged on a single side of the lens, similar in construction to the filter modules of the preferred embodiments described above. As FIG. 4 shows, for example, when a plurality of filter modules 1 are connected in cascade to form a multichannel demultiplexing/multiplexing unit 8, the optical fiber wiring for connecting the individual filter modules 1 becomes straightforward so that no large space is needed. Finally, the above-noted benefits regarding lower production cost and fewer processes for core alignment and fixation apply equally well with this embodiment.

2. **Patentability over Cited References**

To Clarify the importance of a single lens,
Claim 1 ~~as~~ amended defines a filter module that consists essentially of a single lens, three optical fibers, an optical filter, and a mirror, wherein said three optical fibers are arranged on a single side of said lens, wherein the filter module is configured to receive a signal and to output a filtered portion of the signal and an unfiltered portion of the signal on the single side of said lens.

Duck et al. does not disclose the claimed filter module consisting essentially of a single lens, three optical fibers, an optical filter, and a mirror. Rather, *Duck et al.* discloses an optical filter module having two lenses 170, 172, and three optical fibers (180, 182 and 184), an optical filter 179, and a mirror 157. In view of the previously discussed importance of using only a single lens ~~in the present invention~~ and the exclusive nature of the transition term "consisting ~~essentially of~~," including limiting claim 1 to only the material elements set forth therein, claim 1 is not disclosed in *Duck et al.* the invention of

Li et al. fails to correct this deficiency. *Li et al.* discloses a reflection type compact optical switch. The optical switch has a triple fiber capillary 112, a lens 114, a deflector 120, and a reflector 130. The deflector 120 is a plate-shaped transparent element. The deflector 120 is movable and has first portion 122 having a constant width and a second position of the deflector 120, the optical signal is transmitted through a different portion 122 or 124 of the deflector and reflected off of the mirror 130. The reflected optical signal is output via the fiber 104 or 106, depending upon the position of the deflector 120. However, *Li et al.* is not configured to perform wavelength selective transmission defined in claim 1, including receiving a signal and outputting a filtered portion of the signal and an unfiltered portion of the signal on the single side of the lens. This difference in conjunction with the exclusive nature of the amended transition term "consisting essentially of" renders claim 1 allowable over *Li et al.*

A review of the remaining cited references fails to teach or suggest the claimed subject matter. Accordingly, reconsideration and allowance of claim 1 is respectfully requested.

Dependent claims 2-6 and 12-13 each depend either directly or indirectly from allowable independent claim 1, are likewise believed allowable for at least the same reasons that claim 1 is believed allowable.

Claim 7 as amended recites a demultiplexing/multiplexing unit, which is a multichannel demultiplexing/multiplexing unit formed by connecting in cascade a plurality of filter modules, each of the filter modules consisting essentially of a single lens, three optical fibers, an optical filter, and a mirror; and the three optical fibers are arranged on a single side of the lens. For reason similar to those described above for claim 1, none of the cited references disclose the claimed filter module consisting essentially of a single lens, three optical fibers, an optical filter, and a mirror; and the three optical fibers are arranged on a single side of the lens. Accordingly, reconsideration and allowance of claim 7 is respectfully requested.

Dependent claims 8-11 each depend either directly or indirectly from allowable independent claim 7, are likewise believed allowable for the same reasons that claim 7 is believed allowed.

Claim 14 as amended recites a filter module that includes, *inter alia*, a capillary for holding three optical fibers, the capillary provided with a through hole formed by

three inner walls such that the three optical fibers contact each other in the through hole and each of the three inner walls contacts two optical fibers.

The Examiner has acknowledged that *Duck et al.* does not disclose a capillary having a through hole for holding the three optical fibers, where the through hole is formed by three inner walls such that the three optical fibers contact each other in the through hole, and each of the three inner walls contacts two optical fibers, as previously recited in claim 4 (See page 2 of Final Office Action dated July 13, 2005). This patentable subject matter enhances the line of contact between fibers as well as simplifies fabrication as described in detail in the Specification of the present application (*p.* 7, for example). To correct this deficiency, the Examiner mistakenly cites *Li et al.* However, the through hole in the capillary 112 disclosed in *Li et al. is not configured such that the three optical fibers contact each other in the through hole, and moreover is not configured such that each of the inner walls of the through hole contacts two optical fibers*. As such, the present rejection is believed to be obviated. Again, no new issues have been presented after the Final Rejection.

Dependent claims 15-16 and 18-20 each depend either directly or indirectly from allowable independent claim 14, are likewise believed allowable for the same reasons that claim 14 is believed allowed.

CONCLUSION

In view of the present amendments and above remarks, pending claims 1-16 and 18-20 are believed to be novel and non-obvious over the cited art and an indication to that effect is respectfully requested.

Should the Examiner have any questions or wish to discuss this case further for any reason, he is invited to contact the undersigned at the telephone number appearing below.

No fee is believed due with this communication. Should the Examiner consider any other fees to be payable in conjunction with this or any further communication, the Commissioner is authorized to direct payment of such fees or credit any overpayment, to Deposit Account 50-1170.

Respectfully submitted,

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Dated: 10/11/05

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